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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/690,556

10/23/2003

Moshe Hershkovich

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7590 03/18/2008  
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EXAMINER

FLEURANTIN, JEAN B

ART UNIT

PAPER NUMBER

2162

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/690,556	<b>Applicant(s)</b> HERSHKOVICH ET AL.	
	<b>Examiner</b> JEAN B. FLEURANTIN	<b>Art Unit</b> 2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-10, 13-22, 24-38 and 40-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-10, 13-22, 24-38, 40-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. This is in response to the amendment filed on 12/27/2007.

The following is the status of claims:

Claims 7, 11, 12, 23 and 39 have been canceled.

Claims 42-46 have been added.

Claims 1-6, 8-10, 13-22, 24-38, 40-46 remain pending for examination.

### ***Claim Objections***

Claims 42 and 45 are objected to under 37 CFR 1.75 as being a substantial duplicate of claim 1. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 21, 42, 45 and 46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A single claim which claims both an "a system comprising a processor executing a method and a memory for storing a directory service database" is indefinite. See 2173.05(p) [R-5].

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-46 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As set forth in MPEP 2106:

As per independent claims 1, 21, 42, 45 and 46

The independent claim 1, 21, 42, 45 and 46 are directed to a computer-implemented method of searching an ordered database using transformed key entries, in which coded entries. Therefore, the mechanism for searching the node or list consists of coded data and auxiliary data, and wherein the required amount of auxiliary data is substantially independent of the number of keys in the node or list as the purpose of the invention. The claimed subject matter lacks a practical application of a judicial exception (law of nature, abstract idea, naturally occurring article/phenomenon) since it fails to produce a useful and tangible result, and is software per se.

All dependent claims are rejected under the same rational.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 2 of U.S. Patent No. 7,076,602. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to the patent claim 31 to interchangeably "storing a plurality of key entries" to "performing a pre-determined transformation of each key entry of said plurality of key entries so as to obtain a plurality of coded entries" in order to provide an identification of whether a range boundary is closed or open; see Patent No. 7,076,602, col. 35, line 67 to col. 36, line 2).

Claim 31 of U.S. Patent No. 7,076,602 contain(s) every element of claim 1 of instant application serial No. 10/690,556 and thus anticipate the claim 1 of the instant application. Claim 1 of the instant application therefore are not patently distinct from the earlier patent claim 31 as such as are unpatentable over obvious-type double patenting. A later patent/application claim is not patentably distinct from an earlier claim if the later claim is anticipated by the earlier claim.

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<p>Instant application 10/690,556</p> <p>A computer-implemented method of searching an ordered database using transformed key entries, the method comprising the steps of: (a) providing a system including:</p> <p>(i) a memory for storing a plurality of key entries, and</p> <p>(ii) processing logic for:</p> <p>(A) transforming <u>each key entry of</u> said key entries into a respective coded entry, and</p> <p>(B) searching said coded entries;</p> <p>b) performing a pre-determined transformation of <u>each said key entry to produce said respective coded entry</u> so as to obtain a plurality of coded entries, and</p> <p>(c) performing a deterministic search in at least one the data structure within said memory to obtain a match between an input key and a key entry of said key entries,</p> <p>wherein a length, expressed as a number of bits, of said respective coded entry is reduced with respect to a length, expressed as a number of bits, of said key entry from which said respective coded entry was transformed, and wherein a function for performing said pre-determined transformation is substantially independent of specific content of each said key entry of said key entries.</p>	<p>US Pat. No. 7,076,602</p> <p>A method for processing data using an associative search engine having an external memory and for extracting the data from the external memory in response to an input key, the method comprising the steps of:</p> <p>(a) providing the associative search engine (ASE), the ASE having: (i) a search engine manager (SEM), disposed within a chip, said search engine manager including <u>processing logic</u>;</p> <p>(b) providing, for the ASE, an external memory system disposed outside of said chip, said external memory system including:</p> <p>(i) a plurality of memory storage units, each memory storage unit of said memory storage units having at least a first array for storing a plurality of key entries;</p> <p>(c) providing a memory for storing a plurality of associated data entries, said data entries being associated with said key entries;</p> <p>(d) providing an interface for data interfacing between said external memory system and said SEM; (e) arranging said key entries as logical two-dimensional arrays (TDAs) so as to increase a rate of data retrieval from said external memory system to said processing logic, and</p> <p>(f) searching said key entries, in response to the input key, so as to determine if the input key matches a particular key entry of said key entries.</p>
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### ***Response to Arguments/Remarks***

Applicant's arguments filed 4/13/2007 with respect to the pending claims have been fully considered and are persuasive. The 35 U.S.C. 103 rejection has been withdrawn

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However, The nonstatutory double patenting rejection maintains.

And, all the pending claims are rejected under 35 USC 112 second paragraph and 35 U.S.C. 101 rejections.

Claims would be allowable if applicant has overcome the rejection(s) of claims under 35 U.S.C. 112 and 101.

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#### **CONTACT INFORMATION**

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEAN B. FLEURANTIN whose telephone number is 571 – 272-4035. The examiner can normally be reached on 7:05 to 4:35.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E BREENE can be reached on 571 – 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/JEAN B. FLEURANTIN/

Primary Examiner, Art Unit 2162